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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/431,449

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EXAMINER

HOANG, PHUONG N

ART UNIT

PAPER NUMBER

2194

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/431,449

Applicant(s)

GALLUSCIO ET AL.

Examiner

Phuong N. Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1 - 20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/7/00.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 20 are pending for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 7, and 9 -12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson, US patent n. 6,181,707 in view of Brookler et al, US patent no. 6,754,666.**

As to claim 7, Erickson teaches a method for configuring high speed interprocess communications between first and second processes (embodied control applications running on the processors/cards) comprising the steps of:

disposing a message buffer in a shared region of random access memory (RAM) shared between the first and second processes (col. 7 lines 4 - 55);
accumulating message data from the first process in a location in the message buffer (col. 7 lines 15 - 20),

adding to the message list of the second process a memory offset corresponding to the location in the message buffer (col. 7 lines 52 - 57).,

whereby the accumulated message data is transferred from the first process to the second process with minimal data transfer overhead (col. 7 lines 4 - 55)

Erickson does not teach the step of manipulating in the second process the accumulated data at the location corresponding to the offset, the manipulation modifying the accumulated data in place at the location.

Brookler teaches data manipulation, including manipulating in a process accumulated data (imported data) at the location corresponding to the offset, the manipulation modifying the accumulated data in place at the location (in place ' schema and data manipulation operations, col. 15 line 24 - col. 16 line 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Erickson and Brookler because: the accumulated data / imported data can be normalized and cleansed (col. 15, lines 28-32).

As to claim 9, Erickson teaches the step of wherein the message list is a message queue (col. 7 lines 12 - 55).

As to claim 10, Erickson teaches the steps of wherein the adding means
Comprises:

means for retrieving a memory offset in the message buffer corresponding

to the location of data accumulated by the first process, and, means for inserting the memory offset in the message queue corresponding to the second process (col. 7 lines 12 - 55).

As to claim 11, Erickson teaches the steps of atomically assigning the memory offset to an integer location in the message queue corresponding to the second process (col. 7 lines 35 - 55).

As to claim 12, Erickson teaches the steps of means for identifying a memory offset in the message list corresponding to the second process, means for using in the second process message data at a location in the message buffer corresponding to the memory offset, and, means for releasing the message buffer (col.8 lines 1 - 35).

4. Claims 1 - 6, 8, and 13 -18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson, US patent no, 6,181,707 in view of Brookler et al, US patent no. 6,754,666, and further in view of Cader, US patent no. 6,148,377.

As to claim 13, Erickson teaches a method for high speed interprocess communications comprising the steps of:

attaching first and second processes to a message buffer in a shared

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region of random access memory (RAM), each the process having a message list (col. 7 lines 4 - 55),

accumulating message data from the first process in a location in the message buffer (col. 7 lines 15 - 20).,

adding to the message list of the second process a memory offset corresponding to the location in the message buffer (col. 7 lines 52 - 57).

Erickson does not teach the step of the RAM is exclusive to the operating system, and manipulating in the second process the accumulated data at the location corresponding to the offset, the manipulation modifying the accumulated data in place at the location.

Brookler teaches data manipulation, including manipulating in a process data at the location corresponding to the offset, the manipulation modifying the data in place at the location (in place schema and data manipulation operations, col. 15 line 24 - col. 16 line 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Erickson and Brookler because the accumulated data / imported data can be normalized and cleansed (col. 15, lines 28 - 32).

Erickson and Brookler do not teach the step of RAM is exclusive of the operating system.

Carter teaches the step of RAM is exclusive to the operating system (fig, 1

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and 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Erickson, Brookler and Cader's because Cader's RAM exclusive to the operating system would speed up the transferring and accessing data process when it does not have to access through the operating system.

As to claim 14, Erickson teaches the steps of means for detecting a previously created shared region of RAM; and, means for creating and configuring a shared region in RAM for storing accumulated data if a previously created shared region of RAM is not detected by the detecting means (col. 7 lines 15 - 30).

As to claims 15 -18, see claims 9 - 12 above.

As to claim 1, it is the method claim of claim 13. See the rejection of claim 13 above. Further, Erickson teaches whereby the accumulated message data is transferred from the first process to the second process with minimal data transfer overhead (col. 7 lines 4 - 55).

As to claims 2 - 6, see the rejection of claims 14 - 18 above.

As to claim 8, Erickson teaches the steps of creating a message list in the shared region for each the process, whereby the message list can store memory offsets of message data stored in the message bufer (col. 7 lines 1 - 55). See rejection of claim 13 for RAM exclusive of operating system kernel space.

5. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson, US patent no, 6,181,707, in view of Brookler et al, US patent no. 6,754,666, in view of Cader, UD patent no. 6,148,377, and further in view of Bohannon, US patent no. 5,991,845.

6. As to claims 19 and 20, Erickson, Brookler, and Cader do not teach the step of locking the accumulated data to prevent the first process from accessing the accumulated data while the accumulated data is being manipulated.

Bohannon teaches the step of locking the accumulated data to prevent the first process from accessing the accumulated data while the accumulated data is being manipulated (col. 1 lines 46 - 50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Erickson, Brookler, Carter, and Bohannon's because Bohannon's locking system would control the exclusively access to the resources in a multi-processing system.

Response to Arguments

7. Applicant's arguments filed 11/1/05 have been fully considered but they are not persuasive.

8. Applicant argued in substance that

(1) Erickson does not teach the first process adds to a message list corresponding to the second process a memory offset which corresponds the location of data in the message buffer. Such a process describes in page 9 requires more steps.

(2) Brookler does not teach a first process adding a memory offset to a message list of a second process.

(3) Carter does not teach a first process adding a memory offset to a message list of a second process.

9. Applicant respectfully disagrees with applicant's remark

As to point 1, applicant does not point out how Erickson does not teach the limitation. Instead, applicant just argued that such a process requires more steps. Erickson teaches the claimed limitation the first process adds to a... message buffer (col. 7). In a large system, the process sometimes is more detailed, but it shows all claimed limitation.

As to point 2 and 3, examiner does not cite Brookler and Carter for teaching a first process adding a memory offset to a message list of a second process. In,

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fact, applicant just point out paragraphs that examiner did not cite and argued that the prior art does not teach the claimed limitation. Again, it is the combination of Erickson, Brookler, and Carter, not any alone, teaches the claimed limitations. See rejection above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ph
January 20, 2006


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER